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ABSTRACT

This paper presents an overview of a 3-year longitudinal study conducted by the National Institute of Child Health and Human Development (NICHD). The purpose of the study is to examine the concurrent, long-term, and cumulative influences of variations in early child care experiences on the cognitive, linguistic, social, emotional, and physical development of infants and toddlers. More than 1,300 full-term healthy infants and their families from 10 sites in various regions of the United States are included in the study, which began recruiting subjects in 1991 and will end data collection in 1995. Subjects are from urban and rural settings, and include minorities as well as members of single-parent and two-parent families. The NICHD study is expected to provide important empirical information that will be useful in the process of advocacy for chid care and the formulation of policy regarding child care. (MDM)

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The NICHD Early Child Care Network[1],[2],[3]

[1] The study is directed by a Steering Committee and supported by the NICHD through a cooperative agreement (U10), that calls for a scientific collaboration between the grantees and the NICHD staff. The authors for this paper are investigators who designed the study and/or subcomponents of it. They are affiliated with NICHD and with the 10 grantee institutions or their subcontractors. The participating institutions and the investigators are as follows: 1. The National Institute of Child Health and Human Development: Sarah L. Friedman, Ph.D., Kaye H. Fendt, M.P.H., Mark I. Appelbaum, Ph.D. (from Vanderbilt University), Henry N. Ricciuti, Ph.D. (from Cornell University), and Peter C. Scheidt, M.D., M.P.H.; 2. University of Arkansas: Robert H. Bradley, Ph.D. and Bettye M. Caldwell; 3. University of California at Irvine: K. Alison Clarke-Stewart, Ph.D.; 4. University of Kansas: Aletha C. Huston, Ph.D. and Marion O'Brien, Ph.D.; 5. University of New Hampshire and Wellesley College: Kathleen McCartney, Ph.D. and Nancy L. Marshall Ed.D.; 6. Pennsylvania State University and University of Pittsburgh: Jay Belsky, Ph.D., Celia A. Brownell, Ph.D., Susan B. Campbell Ph.D. and Jeff F. Cohn, Ph.D.; 7. Temple University: Marsha Weinraub, Ph.D. and Kathryn A. Hirsh-Pasek, Ph.D.; 8. University of Virginia: Deborah A. Phillips, Ph.D.; 9. The University of Washington: Cathryn L. Booth, Ph.D., and Susan J. Spieker, Ph.D.; 10. The University of Wisconsin and Timberlawn Research Foundation: Deborah L. Vandell, Ph.D. and Margaret T. Owen, Ph.D.; 11. Western Carolina Center: Martha J. Cox, Ph.D.

The Steering Committee: Chairperson: Henry N. Ricciuti (May 1989-April 1991), Bettye M. Caldwell (April 1991-present). Members: Mark I. Appelbaum, Jay Belsky, Cathryn L. Booth, Robert H. Bradley, K. Alison Clarke-Stewart, Martha J. Cox, Kaye H. Fendt (August 1990-August 1992), Sarah L. Friedman, Aletha C. Huston, Kathleen McCartney, Deborah A. Phillips, Deborah L. Vandell, Marsha Weinraub and Sumner J. Yaffe.

[2] This paper is based on a presentation by Sarah L. Friedman at the International Conference on Child Day Care Health: Science, prevention and practice. Atlanta, Georgia, June 15-17, 1992.

[3] Copies of the paper may be obtained from Sarah L. Friedman, Human Learning and Behavior Branch, National Institute for Child Health and Human Development, 9000 Rockville Pike, Bethesda Md. 20892. Phone number: (301) 496-6591; FAX number: (301) 402-2085.

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Running Head: The NICHD Study of Early Child Care

Number of words in text: 1969; 1 table; 1 figure.

Key words: Infancy, child care, rearing environment, cognitive, linguistic, social and emotional development, ecological model of human development.

The NICHD Study of Early Child Care: A Comprehensive Longitudinal Study of Young Children's Lives.

Abstract

The NICHD Study of Early Child Care is an ongoing, prospective, three-year longitudinal study of over 1300 full-term healthy infants and families from 10 sites across the U.S.A. While the sample is not nationally representative, the subjects come from major regions of the country: the East Coast, the West Coast, the Mid-West, the North and the South. They come from urban and from rural settings, and include minorities as well as single parent and two parent families. The study examines the concurrent, long-term and cumulative influences of variations in early child care experiences on the cognitive, linguistic, social, emotional, and physical development of infants and toddlers. The study design takes into account the complex interactions among characteristics of the family and home, of the child care environments, and of the child. Subject recruitment started in January 1991 and data collection is scheduled to end in the beginning of 1995.

In recent years much research has been conducted about the impact of child care on the development of children (1,2). The impetus for that research has been a combination of (a) historical trends in women's employment and (b) cultural beliefs, psychological theory and research findings about the central role of mothers in the rearing of infants and young children. Over the last 15-20 years there has been an increase in the participation of mothers in the workforce (1, pages 16-42) and a decrease in the age of the children at the time their mothers began to work away from home and to rely on substitute child care (3). At the same time, well entrenched cultural beliefs, psychological theory (4,5) and research findings (6,7) have emphasized the important role of mothers in the development of infants and young children. As a consequence of this conflict between child rearing ideals and the reality of maternal employment, parents and psychologists have voiced concerns about the effects of child care on infants and young children. The concerns of psychologists were translated into their scientific work and have led to several waves of research (1, pages 51-76) (5) and to an increasingly more complex conceptualization of child care and its relationship to child development.

Despite the large quantity and high quality of many of the relevant publications, our understanding of the effects of child care on child development is incomplete and scientists who represent different theoretical orientations make different

predictions about these effects. This state of affairs is, to a large extent, due to the fact that the issues pertaining to child care and its effects are numerous (1, pages 276-284)(8), and conceptually interdependent. At the same time, the studies that have been conducted to date have been too small to deal with more than isolated issues. Small studies cannot provide comprehensive descriptions of the interactions between the ecologies of the home and of the child care environments, of the interactions between these ecologies and the characteristics of the children or of the cumulative effects that these interactions are hypothesized to have on the development of children. To overcome some of the limitations of small studies, investigators formally reviewed the literature and/or conducted cross-study analyses of findings from diverse studies with common research questions and measures (9,10,11,12). But such reviews and analyses are constrained by the information available in existing studies and, consequently, may be biased (13).

The NICHD Study of Early Child Care is the first large, comprehensive, prospective, longitudinal study of the effects of infant child care. The study was initiated by the NICHD Director and his staff (14) and its goal is to examine the influence of variations in early child care on the psychological and physical development of infants and toddlers from a variety of family backgrounds. This goal is being accomplished through the implementation of a study design that takes into account the

complex concurrent, long-term and cumulative interactions among characteristics of the family and home, of the child care environments, and of the child.

To achieve the goal of the study, a multi-center research network was created. Ten data collection sites plus an administrative and data coordinating site participate in the study (Footnote 1). The research plan was developed by a Steering Committee consisting of a chairperson, the principal investigators from the 10 data collection sites, NICHD program staff, and NICHD Data Coordination Center staff. The implementation of the study is directed by the Steering Committee and executed at the data collection sites. Data coordination, monitoring, and analysis are performed centrally, by the Data Coordinating Center. Overall coordination is handled by NICHD and progress is monitored by an Advisory Board of independent psychologists and by NICHD Staff.

Sample Enrollment and Composition

Subject recruitment started in January of 1991 and data collection is scheduled to end in early 1995. One thousand three hundred and sixty-four families with full-term healthy newborns were enrolled in the study over a ten-month period. Potential participants were selected from the 8986 mothers giving birth in study hospitals during selected sampling periods. Participants

were selected in accordance with a conditionally random sampling plan which was designed to assure that the recruited families (a) include mothers who planned to work full time (53%) or part time (23%) in the child's first year, as well as those who planned to stay at home with the child (24%) and (b) reflect the demographic diversity of the sites. The recruited families came from a wide range of social-economic and racial backgrounds (19% minorities, 11% low education). Both two-parent families and single-parent families (14%) were included. This method of subject enrollment allowed the study to have a heterogenous (though not nationally representative) sample and to access the whole spectrum of child care arrangements.

Overview of the Design

At each of the 10 data collection sites, a minimum of 120 infants and their parents were enrolled in the study (range=123-150). Mothers were contacted shortly after their infant's birth and were invited to participate in the study until the infant reaches three years of age. Over this 36 month period, the infant is visited and observed at home, in child care, and in a laboratory playroom. Assessments include natural and semi-structured observations, interviews, questionnaires, and other measures of intellectual, linguistic, social and emotional development. The research design, presented in Table 1, includes parallel measures to be collected in the home and in child care at the various

assessment points.

Each family is visited in the home when the child is 1, 6, 15, 24 and 36 months old. The child is assessed in the laboratory setting at 15, 24, and 36 months and the child care situation is observed when the child is 6, 15, 24, and 36 months. In addition, the family is contacted by phone every three months for ongoing status reports. The particular age points were selected to coincide with important periods in the development of the child and the family. In April of 1992 the first study children reached the age of 15 months.

Table 1 about here

The Steering Committee agreed that the effects of infant child care must be considered within an ecological framework that incorporates information about (1) the family and home, (2) the child care environment, and (3) individual differences among children. The framework is further detailed in Figure 1. The depicted model shows that the home environment, the child care environment, and the child's characteristics are interdependent and influence outcomes for the child, for the parent-child relationship, and for the family. Furthermore, demographic characteristics of the family are believed to predict features of child care (quantity, quality, type and time of entry) and to be related to the family characteristics and to the home

environment. With this model in mind, we seek to move beyond the determination of possible developmental risks that may be presented by child care as a unitary category. Rather, we want to find out how the effects of non-maternal care vary as a function of different variables such as child care quality, the extent of its use, characteristics of the children and of their family and home. Our interest is in concurrent as well as in long-term and cumulative effects of environments on outcome. We view development as complex, with particular outcomes at one point in time setting the stage for the next series of transitions. In addition, we recognize that the same strengths or difficulties in children's development or in their relationships may be manifested in different ways at different developmental stages. Therefore, our investigation of the immediate, the long-term and the cumulative effects of the rearing environments will be informed by our understanding of the ways in which early developmental status is related to later status and by our notions of the dynamic relationships between individuals and their environments.

Figure 1 about here

The components of the model were further explicated as follows. Demographic characteristics to be studied include family income, parents' education, race, type of family (single parent or two-parent), and family size. Under family and maternal

characteristics we chose to study mother-partner relationships, stresses and supports, parental attitudes, beliefs, and expectations. The home environment is defined in terms of physical characteristics, and the quantity and quality of maternal care. The child care environment is defined in terms of the type of care (home, family, center, or multiple, i.e. different types of care arrangement each day or each week), the quality of care, hours per week in care, duration in care and age at entry. Child characteristics that we chose to focus on included age, gender, temperament, and health. Outcomes for the child are in the domains of cognition, language, social and emotional development, and physical growth. Outcomes in terms of mother child relationships are those of attachment and related constructs. Outcomes for the family are defined in terms of mother-partner relationships.

Most of the variables chosen for this study are evaluated in multiple ways. For example, the evaluation of day care quality involves assessment of relations among structural and process variables. Structural variables refer to aspects of the child care environment such as the ratio of care providers to number of children, the qualifications of the providers, and the number of children in the child care setting. Process variables have to do with the quality of the care provided (e.g., responsiveness and sensitivity to the emotional and intellectual needs of children). The process variables are based on live observations of the

experiences children have with other children and adults in their care arrangements. The socio-emotional outcomes include attachment to the mother, independence, compliance with adults, behavioral adjustment, behavioral problems, and competence in interactions with peers and adults. Assessment of the mother-child attachment relationship is made using various measures, including the Strange Situation. Cognitive outcomes include general intellectual functioning, attention, levels of play, expressive and receptive language.

Contributions to Advocacy and Policy

The NICHD Study of Early Child Care is expected to provide important empirical information that will be most useful in the process of advocacy for child care and for the formulation of policy regarding infant child care.

o The study will provide a natural history of infant care in the 1990s and help us establish a baseline of data pertaining to the kinds of care being used by families concurrently and over time.

o This study will allow us to identify child care attributes that are associated with child care quality. In particular, the study will identify the easy to identify and regulate characteristics that are associated with quality of care.

o We will identify demographic characteristics and psychological family characteristics associated with families' child care decisions.

o Family relationships, parental mental health, family stress, and so on, are not just input to child development or moderators of child care effects; they are also outcomes. Therefore, the study will examine the consequences for families of maternal employment and child care choices.

o In this study we will examine the relationship between infants' child care arrangements and children's concurrent and long-term development. Specifically, the study will investigate the association between children's experiences in child care and their social, emotional, language, cognitive and physical development.

o The collaborative study will examine whether the social ecology of the home moderates the effects of child care. It will tell us whether children from different home environments are differentially affected by similar child care experiences.

o And last but not least, we will examine whether individual differences among children moderate the effects of infant care on child development.

The magnitude of the study and the expected complexity of the findings will contribute to the unraveling of complex issues. This should lead to better information for parents and policy makers about the extent to which the effects of child care on the development of children depend on conditions that are under human control. The study will help define the details of the conditions under which non-maternal care can serve as a meaningful complement to home care in promoting optimal psychological development in very young children.[4]

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[4] The implementation of the study has been carried out by a dedicated staff. Special mention goes to the 10 site coordinators. They are Kathryn Berry, R.N., Judith Brisby, Ph.D., Yvonne Caldera, Ph.D., Darlene Clements, Ph.D., Celia Nourse Eatman, Elizabeth Lyz Jaeger, Ph.D., Jean Kelly, Ph.D., Christine Payne, Ph.D., Ann Stright, and Wendy Wagner Robeson, Ed.M.

The study has also benefited from contributions by Wendy Goldberg, Ph.D., Jean Gowen, Ph.D., Ellen Greenberger, Ph.D., and Sandra Scarr, Ph.D. who are co-Principal Investigators on the NICHD Study of Early Child Care.

References

1. Hayes CD, Palmer JL, Zaslow M, editors. Who cares for America's Children. Child care policy for the 1990s. Washington, D.C. Academic Press, 1990.

2. Fox N, Fein GG, editors. Infant day care: The current debate. Norwood, New Jersey: Ablex Publishing Corporation, 1990.

3. O'Connell M, Bachu A. Who's minding the kids? Child care arrangements: 1986-87; Washington, DC: U.S. Bureau of the Census; Current Population Reports, Series P-70. No. 20.

4. Bowlby, J. Attachment and Loss, Vol. 1, Attachment. New York: Basic Books, 1969

5. Weinraub, M. Historical perspectives, theoretical models and child care: Toward a research agenda for the 1990s. American Journal of Public Health. This issue.

6. Ainsworth MDS, Blehar M, Waters E, Wall S. Patterns of Attachment. Hillsdale NJ: Erlbaum, 1978.

7. Clarke-Stewart KA. Interactions between mothers and their young children: Characteristics and consequences. Monographs of the Society for Research in Child Development 1973;38(6-7, Serial No. 153).

8. Friedman S, Brooks-Gunn J, Vandell D, Weinraub M. Issues, findings and future directions in child care research: A summary of key issues from four papers. American Journal of Public Health. This issue.

9. Phillips DA, McCartney K, Scarr S, Howes C. Selective review of infant day care research: A cause for concern. Zero to Three 1987;7:18-21.

10. Belsky J. The "effects" of infant day care reconsidered. Early Childhood Research Quarterly 1988;3:235-272.

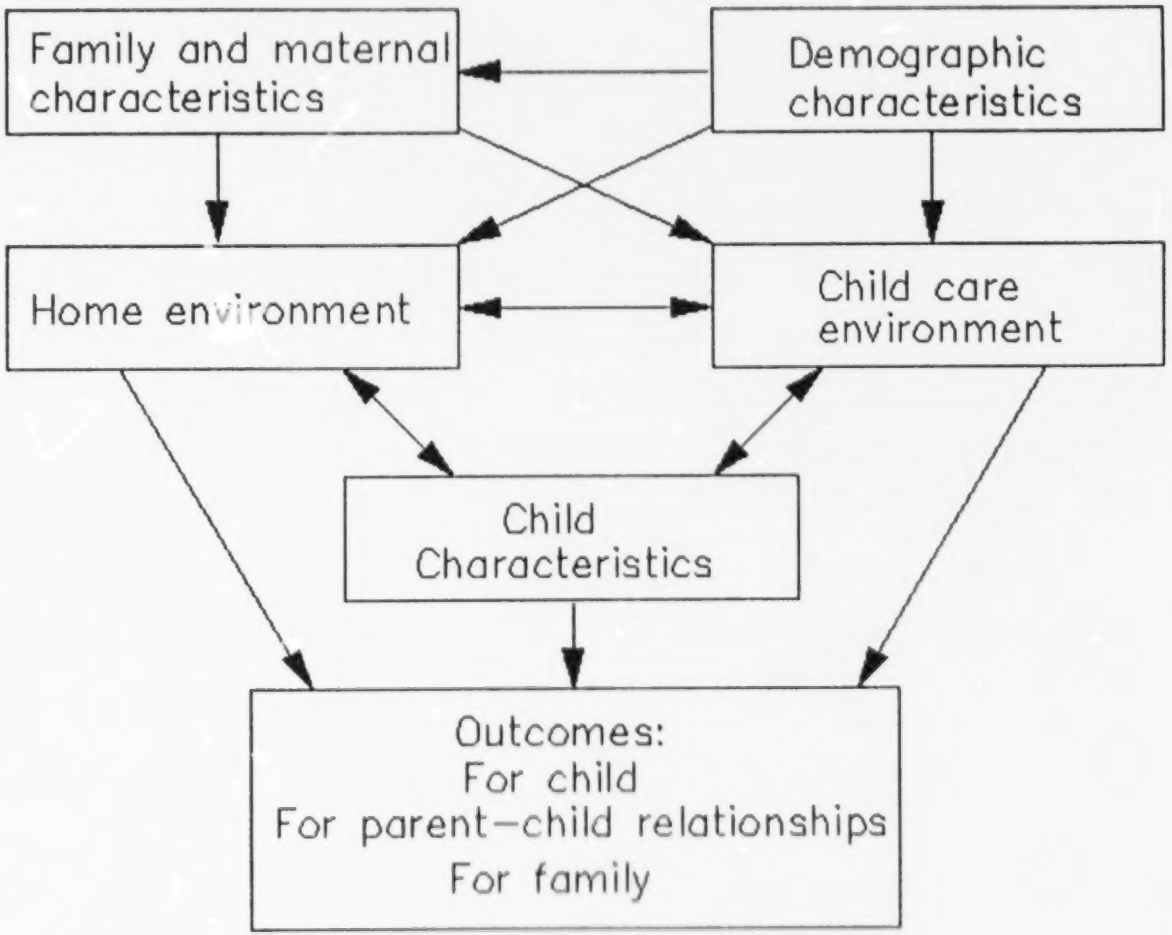
11. Clark-Stewart KA. Infant day care, maligned or malignant? American Psychologist 1989;44:266-273.

12. Lamb ME, Sternberg KT, Prodromidis M. Nonmaternal care and the security of infant-mother

Table 1

Data Collection Schedule

VISITS	Child's age (months)				
	1	6	15	24	36
o HOME	X	X	X	X	X
o ALTERNATE CARE		X	X	X	X
o LABORATORY			X	X	X
o PHONE	X	X	X X X	X X	X X X


Family and maternal characteristics
Demographic characteristics
Home environment
Child care environment
Child Characteristics
Outcomes:
For child
For parent–child relationships
For family